

# **OPTIMIZING THE FORMATION OF YTTRIUM IRON GARNET (YIG) VIA RESPONSE SURFACE METHOD (RSM) FOR DIELECTRIC RESONATOR ANTENNA (DRA) APPLICATION**

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DIELECTRIC RESONATOR ANTENNA APPLICATION MADE BY SOLID  
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**by**

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## **DECLARATION**

I hereby declare that I am the sole author of this dissertation. This is a true copy of the dissertation, including any required final revisions, as accepted by my examiners. It has not previously submitted for the basis of the award of any degree or diploma or other similar title of this for any other diploma/examining body or university. I understand that my dissertation may be made electronically available to the public.

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## LIST OF ABBREVIATIONS

<b>ANOVA</b>	Analysis of Variance
<b>BBD</b>	Box-Behnken Design
<b>BW</b>	Bandwidth
<b>CCD</b>	Central Composite Design
<b>CSM</b>	Core Shrinking Model
<b>CSSR</b>	Conventional Solid State Reaction
<b>DF</b>	Degree of Freedom
<b>DM</b>	Dielectric Materials
<b>DOE</b>	Design of Experiments
<b>DRA</b>	Dielectric Resonator Antenna
<b>Ea</b>	Activation Energy
<b>EV</b>	Experimental Values
<b>GBH</b>	Ginstling-Brounshtein-Habert
<b>GOF</b>	Goodness of Fit
<b>IRD</b>	Incomplete Reaction Diffusion
<b>ISM</b>	Internal Standard Method
<b>JMA</b>	Johnson Mehl Avrami
<b>LOF</b>	Lack of Fit
<b>MDM</b>	Magneto-Dielectric Materials
<b>MS</b>	Mean Square
<b>Nv</b>	Number of Pores per Volume
<b>Na</b>	Pores per Unit Area
<b>OPYIG</b>	Optimized YIG